# Comparative Analysis of Selected Anthropometric Variables between Tribal and Non-Tribal Male Players of Himachal Pradesh

Dr. Hari Singh<sup>1</sup>\* Dr. Lakshmi Tara<sup>2</sup>

<sup>1</sup> Assistant Professor, Department of Physical Education, H. P. University, Summerhill, Shimla-5

<sup>2</sup> Village: - Lippa, District: - Kinnaur, Himachal Pradesh

Abstract – The present investigation has been led on 300 players with an expect to discover the distinction in chose anthropometric factors for example measurements between tribal (n=150) and nontribal (n=150) male senior secondary school players of Himachal Pradesh. Tribal examples were taken from the two tribal areas for example Lahaul-Spiti and Kinnaur and two tribal tehsil for example Bharmour and Pangi of Chamba district in Himachal Pradesh. Non-tribal examples were taken from the three regions for example Hamirpur, Bilaspur and Una of Himachal Pradesh. Every player was tried for different distance across estimations important for estimation of humerus bicondylar breadth, wrist width, femur bicondylar measurement and lower leg breadth of tribal and non-tribal players. To break down the distinction in chose breadths of two gatherings of tribal and non-tribal players were resolved through 't' test. From the discoveries, it has been discovered that non-tribal players had essentially more noteworthy wrist breadth than tribal senior auxiliary school players. In humerus bicondylar breadth and femur bicondylar measurement tribal players had marginally more noteworthy mean an incentive than non-tribal senior auxiliary school players while in lower leg distance across non-tribal players had somewhat more prominent mean qualities than tribal players.

Key Words: Anthropometric, Diameter

### INTRODUCTION

Anthropometry is the investigation of the estimation of the human body regarding the components of bone, muscle, and (fat) tissue. Proportions of weight, tallness and diverse breadths or width and subcutaneous fat tissue are imperative since people with extensive qualities are accounted for to be at expanded dangers for hypertension, grown-up beginning diabetes mellitus, cardiovascular ailment, joint inflammation, different types of malignant growth, and different maladies. Joined with the dietary and related poll information, and the conclusions, biochemical anthropometry fundamental and basic data expected to help with depicting the information gathered from people in the example.

The term anthropometry developed by J. S. Elsholtz, a German Physician, in Seventeenth Century alludes to estimation of human body and its different extents. It envelops a wide assortment of estimation techniques for deciding perpetual number of body measurements. Every client joins an alternate arrangement of anthropometric estimations to clarify the issue under scrutiny. Other than a couple of

normal estimations, similar to stature and body weight, the arrangement of estimations chosen by one client once in a while matches with that of the other, as a rule. Be that as it may, under explicit conditions, where the objective to be accomplished is pretty much comparable the estimations chosen by two clients may show significant comparability. The varieties documental in the method of estimation from a wide assortment of sources have minimal viable criticalness in generally case. In any case, to a plan engineer it is basic to know about the diverse sources and the varieties that exist in the anthropometric information. Anthropometry has significantly added to sports prescription administration. Physiotherapist in games prescription centers utilizes anthropometry in the ordinary treatment and recovery of the harmed. Estimation of body measure incorporate such unmistakable data as tallness, weight and surface territory while estimation of the body extent depict the connection somewhere in the range of stature and weight and among length, width and circuit of different body portions. It has been bound that top competitor in certain games will in general have those corresponding that biomechanically help the specific execution required.

### **OBJECTIVES OF THE STUDY**

To study and discover the distinction in breadths of Senior auxiliary school male players of tribal and non-tribal territories of Himachal Pradesh in regard of their chose measurements for example humerus bicondylar width, wrist distance across, femur bicondylar breadth and lower leg measurement.

### **HYPOTHESIS**

It is hypothesize that there would be no noteworthy distinction between senior secondary school tribal and non-tribal male players in regard of their chose widths for example humerus bicondylar distance across, wrist measurement, femur bicondylar width and lower leg breadth.

### **METHODOLOGY**

To accomplish the reason for the present examination 300 players for example tribal (n=150) and non-tribal (n=150) were chosen haphazardly from the six district of Himachal Pradesh for example tribal (Kinnaur, Lahaul and Spiti and two tribal tehsil for example Bharmour and Pangi of Chamba region) and nontribal (Hamirpur, Bilaspur and Una district) are utilized as subjects in this investigation. Age group extended from 14 to 19 Years. Every player was tried for different anthropometric estimations important for estimation of humerus bicondylar distance across, wrist breadth, femur bicondylar width and lower leg distance across was utilized for the estimations. To test the criticalness of mean contrast among tribal and non-tribal male players, measurable method of 't' test was connected.

### **RESULTS AND DISCUSSION**

### Table 1

## t-value for tribal and non-tribal senior secondary school male players with respect to their mean score on Humerus Bicondylar Diameter

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Humerus Bicondylar	150	6.45	1.677	.120	.137	298	.836
Non- Tribal	Diameter	150	6.33	.525		.043		

Not significant at 0.05 level of confidence

Table 1 uncovers that t esteem for tribal and nontribal senior secondary school male players as for their mean scores on 'humerus bicondylar distance across' turned out to be .836, which is measurably inconsequential at 0.05 dimension of essentialness (Table estimation of 't' at 0.05 dimension =1.97 for df 298.) This showed tribal and non-tribal senior male players auxiliary school don't fundamentally as for their mean scores on 'humerus bicondylar breadth'. Since, the mean scores for tribal senior secondary school male players (6.45) is higher in contrast with non-tribal senior auxiliary school male

players (6.33), it might be translated that tribal and non-tribal senior secondary school male players are pretty much the equivalent on the variable of 'humerus bicondylar breadth' Hence, the planned theory that "there would be no noteworthy distinction among tribal and non-tribal senior secondary school male players in the variable of humerus bicondylar measurement" null hypothesis stand acknowledged.

Table 2

### t-value for tribal and non-tribal senior secondary school male players with respect to their mean score on Wrist Diameter

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Wrist Diameter	150	5.47	.501	.220	.041	298	**3.733
Non- Tribal		150	5.69	.520		.042		

\*\*Significant at 0.01 level of confidence

Table 2 uncovers that t esteem for tribal and nontribal senior secondary school male players as for their mean scores on 'wrist breadth' turned out to be 3.733, which is factually noteworthy at 0.05 dimension of centrality (Table estimation of 't' at 0.01 dimension = 2.59 for df 298.) This demonstrated tribal and non-tribal senior auxiliary school male players contrast altogether as for their mean scores on 'wrist distance across'. Since, the mean scores for tribal senior secondary school male players (5.47) is lower in contrast with non-tribal senior auxiliary school male players (5.69), it might be translated that non-tribal senior secondary school male players have better 'wrist distance across' in contrast with tribal senior auxiliary school players. Subsequently, the detailed theory that "there would be no huge contrast among tribal and non-tribal senior auxiliary school male players in the variable of wrist breadth" null hypothesis stand rejected.

Table 3

### t-value for tribal and non-tribal senior secondary school male players with respect to their mean score on Femur Bicondylar Diameter

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Femur Bicondylar	150	8.57	.595	.093	.049	298	1.295
Non- Tribal	Diameter	150	8.48	.653		.053		

Not significant at 0.05 level of confidence.

Table 3 uncovers that t esteem for tribal and non-tribal senior secondary school male players concerning their mean scores on 'femur bicondylar width' turned out to be 1.295, which is measurably unimportant at 0.05 dimension of centrality (Table estimation of 't' at 0.05 dimension =1.97 for df 298.) This showed tribal and non-tribal senior auxiliary school male players don't contrast fundamentally as for their mean scores on 'femur bicondylar distance

across'. Since, the mean scores for tribal senior secondary school male players (8.57) is higher in contrast with non-tribal senior auxiliary school male players (8.48), it might be deciphered that tribal and non-tribal senior secondary school male players are pretty much the equivalent on the variable of 'body weight' Hence, the planned theory that "there would be no critical distinction among tribal and non-tribal senior secondary school male players in the variable of 'femur bicondylar breadth" invalid speculation stand acknowledged.

#### Table 4

### t-value for tribal and non-tribal senior secondary school male players with respect to their mean score on Ankle Diameter

Group	Variable	N	Mean	S.D	M.D	S.E.M	d f	't'
Tribal	Ankle Diameter	150	5.88	.623	.107	.051	298	1.856
Non- Tribal		150	5.99	.327		.027		

Not significant at 0.05 level of confidence.

Table 4 uncovers that t esteem for tribal and nontribal senior secondary school male players as for their mean scores on 'lower leg distance across' turned out to be 1.856, which is measurably immaterial at 0.05 dimension of essentialness (Table estimation of 't' at 0.05 dimension =1.97 for df 298.) This showed tribal and non-tribal senior auxiliary school male players don't vary altogether as for their mean scores on 'lower leg width'. Since, the mean scores for tribal senior auxiliary school male players (5.88) is lower in contrast with non-tribal senior secondary school male players (5.99), it might be deciphered that tribal and non-tribal senior auxiliary school male players are pretty much the equivalent on the variable of 'lower leg breadth' Hence, the detailed theory that "there would be no huge distinction among tribal and non-tribal senior auxiliary school male players in the variable of lower leg width" invalid speculation stand acknowledged.

### **DISCUSSION OF FINDINGS**

In wrist distance across tribal Senior Secondary School male players and non-tribal Senior Secondary School male players of Himachal Pradesh vary essentially. The wrist distances across of non-tribal senior auxiliary school players are altogether more noteworthy than the tribal senior secondary school players. More noteworthy wrist width connotes more prominent hard zone that furnishes the non-tribal players with more prominent quality and security, which gives them advantage in assault and resistance in various games. Expanded wrist distance across is straightforwardly corresponding to quality, which helps in hostile and protective abilities in playing diverse sorts of recreations.

The mean estimation of humerus bicondylar measurement and femur bicondylar width of tribal male players were marginally more prominent and in the factors of wrist distance across and lower leg breadth the mean estimation of tribal male players were lesser than non-tribal male players.

Anyway there was no huge distinction in humerus bicondylar measurement, femur bicondylar breadth and lower leg width. In these measurements tribal senior secondary school players have more prominent mean qualities with the exception of lower leg distance across than non-tribal senior auxiliary school male players. It might be because of the way that tribal senior auxiliary school players are heavier than non-tribal senior secondary school players.

### **CONCLUSIONS**

- Tribal senior auxiliary school male players have more prominent humerus bicondylar breadth when contrasted with non-tribal senior secondary school male players. Measurably, it has been seen that tribal and non-tribal senior secondary school male players don't vary fundamentally from one another in humerus bicondylar distance across.
- 2. Non-tribal senior secondary school male players have more prominent wrist width when contrasted with tribal senior auxiliary school male players. Measurably, it has been seen that tribal and non-tribal senior secondary school male players varv wrist essentially from one another in measurement.
- 3. Tribal senior secondary school male players have more noteworthy femur bicondylar breadth when contrasted with non-tribal senior auxiliary school male players. Factually, it has been seen that tribal and non-tribal senior auxiliary school male players don't vary fundamentally from one another in femur bicondylar breadth.
- 4. Non-tribal senior auxiliary school male players have more prominent lower leg distance across when contrasted with tribal senior secondary school male players. Measurably, it has been seen that tribal and non-tribal senior secondary school male players don't vary altogether from one another in lower leg distance across.

### **REFERENCES**

Baacke, W.T. (1964). "Relationship of selected Anthropometric and Physical Performance measures to Performance in Running Hop, Step and Jump," Research Quarterly, Vol. 35, pp. 107-115.

- 2. Gil, S., et al. (2007). "Selection of Young Soccer Players in terms of Anthropometric and Physiological Factors", The Journal of Sports Medicine Physical Fitness, Vol. 47, pp. 25 30.
- 3. Hencken, C. & White, C. (2006). "Anthropometric Assessment of Premiership Soccer Players in Relation to Playing Position", European Journal of Sports Science, Vol. 6, Issue 4, pp. 205 211.
- 4. Hussain, Tahir. P. (2011). Anthropometry in Physical Education and Sports, (Chawla offset printers, Sports publication, New Delhi, p. 1, 9.
- 5. Ibrahim, S., Kumar, S., & Reddy. (2013). "A Study on the Anthropometrical Variables Among High and Low Level Performer Rowers of Andhra Pradesh in India" Asian Journal Physical Education and Computer Science in Sports. Volume no. 8, no. 1. pp. 78-80.
- 6. Karkare, Ajay. (2011). "Anthropometric Measurements and Body Composition of Hockey Players with Respect to their Playing Positions", Indian Streams Research Journal, Vol. I, X.
- 7. Nandi, S.C. (2014). "Relationship of Anthropometric and Physiological Variables to Handball Playing Ability", Vyayam Vidnyan, Vol. 47, Issue 1, pp. 45–49.
- 8. Nath, Surinder. (1993). Anthropometry the Measurement of Body Size, Shape and Form, (Friends Publications, p.15, 9, 21, pp. 31-32.
- 9. N, Navya., & Nalam, U. (2017). "A Comparative Study of Anthropometric Measurements of Children Attending Urban and Rural Anganwadi Centres of a Coastal District in Karnataka, India." International Journal of Community Medicine and Public Health/January, vol. 4, Issue1, pp. 91-95.
- **10. Viyaya Lakshmi, (2005).** Anthropometry Sports Physique Evaluation, (Khel Sahitya Kendra, New Delhi 2005), p. 1.

### **Corresponding Author**

### Dr. Hari Singh\*

Assistant Professor, Department of Physical Education, H. P. University, Summerhill, Shimla-5

singhhari7172@gmail.com