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A COMPARATIVE ANALYSIS OF SPECIFIC ANTHROPOMETRIC PARAMETERS AMONG MALE KABADDI PLAYERS FROM INTER- COLLEGE AND INTER-UNIVERSITY TOURNAMENTS

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Abstract:
This study aimed to determine whether there were any notable differences in anthropometric measurements between inter-collegiate and inter- university men Kabaddi players. A total of thirty men Kabaddi players were chosen as study participants for this reason. The participants in the national Kabaddi competition were chosen from Visvesvaraya Technological University in Belgau. The participants were split up into two groups, each with fifteen players. The subjects' ages ranged from 23 to 28 years old. Every subject comes from a variety of socioeconomic backgrounds. Male kabaddi players who played intercollegiate and interuniversity were compared using the student's t-test for independent data. The unpaired t-test was used to evaluate the data. The level of significance was chosen at 0.05 in order to test the hypothesis.
Key Words: Inter-university kabaddi, men kabaddi players, anthropometric measurements.

Introduction

The new term "anthropometry" is derived from the Greek terms "anthropos" and "metrein." "Metrein" means to measure, and "anthropos" signifies man. Consequently, anthropometry, taken literally, is the measurements of the body of humans to determine its precise measurements & the proportions on its various parts. Since the dawn of recorded history, anthropometry—the measurement of bodily structure—has been the most ancient kind of body measurement. The early origins of measurements of anthropometry throughout their significance of the exact proportions of the human body can be traced back to the distant Indian civilisation, where a treatise known as the Silpi Sastra examined the body's outline by breaking it down into 480 parts. The ancient Egyptians also employed a crude form of anthropometry between the thirty-fifth and twenty-second centuries B.C. The body had been divided into 19 equal pieces, each measuring the length of the middle finger of the high priest, in order to determine the anatomical proportions of each structure.

The first measurement method used in physical education was anthropometry. The study of human anatomy and proportions dates back many centuries. Anthropometry, or measurement, has been used by humans from the beginning of time. Up until 1935, when a mathematician in Brussels named Baron Quêtlet used only mathematical techniques to determine the physical constants of the human body and establish that the binomial law, also known as the law of chance, applies to human proportions, artists made up the majority of anthropometry's workforce. This conclusion was subsequently validated roughly fifty years later by Sir Francis Galton, who methodically examined measurements of specific physical constants of English men

and women. In the study of human biology, the discipline of anthropometry first appeared in the seventeenth century.

The earliest form of assessment utilised in physical education worldwide was anthropometric measurement. The American Association for the Advancement of Physical Education suggested fifty different metrics. 44 anthropometric measurements and many strength tests were included in Sargent's chart.

The objective assessment of the body's components and functioning is known as anthropometric measurement. Weight, height in total, chest circumference, width, depth, and breadth are all included in the measurements of structure. Items like muscular strength, posture, breathing capacity, basal metabolic rate determined from cardiovascular factors, arterial & venous blood pressures, and pulse rate are all part of the function measurement. Physical education professionals have long recognised that age, height, and weight distribution have a significant impact on both boys' and girls' performance.

It could be relevant to briefly go over a few factors to take into account when measuring height and weight before presenting the various classifications indices and age, height, and weight tables. These tests are so widespread that sometimes the examiners are excessively lenient, leading to inaccurate findings. If the outcome is to be truly valuable, keep in mind that practice and focus to detail are just as crucial here as they are in any assessment.

Selection of the variables:

The anthropometric measurements listed below were chosen for the investigation. To measure the various anthropometric measurements, flexible steel tape was utilised.

Anthropometric measurements:

- Leg Length
- Upper leg length.
- Lower leg length
- Arm Length
- Upper arm length.
- Lower arm length.
- Calf girth.
- Thigh girth.

Analysis of data

Table 1 shows the mean, standard deviation, and t-value of selected anthropometric measurements for male Kabaddi players across college and university levels.

Variables	No. of Subjects	Group	Mean	Standard Deviation	't' Value
Leg Length	15 15	Int. Col Int. Uni	95.13 95.66	3.88 3.82	0.378
Upper leg length	15 15	Int. Col Int. Uni	43.20 44.66	2.36 3.39	1.373
Lower leg length	15 15	Int. Col Int. Uni	51.86 50.73	2.79 4.09	0.885
Arm Length	15	Int. Col	75.53	3.81	0.047

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	15	Int. Uni	75.60	3.92	
Upper arm length	15	Int. Col	39.80	1.32	1.313
	15	Int. Uni	29.13	1.45	
Lower arm length	15	Int. Col	45.46	3.81	0.496
	15	Int. Uni	46.13	3.54	
Calf girth	15	Int. Col	35.80	2.27	2.113*
	15	Int. Uni	38.86	5.13	
Thigh girth.	15	Int. Col	82.86	4.62	2.495*
	15	Int. Uni	88.73	7.84	

* Significant at the 0.05 level.

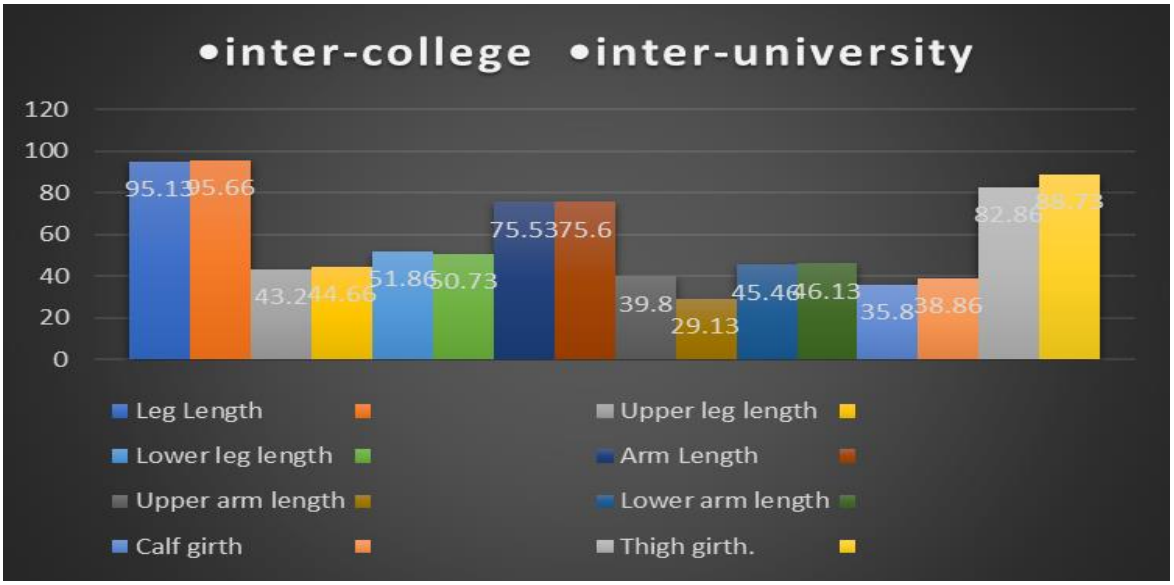

Figure 1 shows the mean, standard deviation, and t-value for selected anthropometric measurements among male Kabaddi players across colleges or universities.

1. Leg Length

The findings of intercollegiate and interuniversity studies on the variable anthropometric measurement are shown in Table 1. According to the descriptive statistics, the sub-variable leg length's mean and standard deviation across universities are 95.66 and 3.82, respectively. Nonetheless, the mean and standard deviation for inter-college were 95.13 and 3.88, respectively. When comparing the mean values of the two groups, it was revealed that inter-university players had better leg length than inter-college players, however the (t) value of 0.378, as displayed in the above table, was statistically insignificant.

2. Upper Leg Length

According to the descriptive statistics, the sub-variable upper leg length's mean and standard deviation are 44.66 and 3.823.39, respectively, across universities. Nonetheless, the mean and standard deviation for inter-college were 43.20 and 2.36, respectively. The above table's (t) value of 1.373 was determined to be statistically insignificant; nonetheless, a comparison of the

mean values of the two groups revealed that intercollegiate athletes had superior upper leg length.

3.Lower leg length

The mean and standard deviation of the sub-variable lower leg length across universities are 50.73 and 40.9, respectively, according to the descriptive statistics. Nonetheless, the mean and standard deviation for inter-college were 51.86 and 2.79, respectively. When comparing the mean values of the two groups, it was revealed that inter-university players had better lower leg length than inter-college players, however the (t) value of 0.885, as displayed in the above table, was deemed statistically insignificant.

4. Arm Length

The mean and standard deviation of the sub-variable arm length between universities are 75.60 and 3.92, respectively, according to the descriptive statistics. Nonetheless, the mean and standard deviation for inter-college were 75.53 and 3.81, respectively. When comparing the mean values of the two groups, it was determined that inter-university players had better arm length than inter-college players, however the (t) value of 0.047, as displayed in the above table, was deemed statistically insignificant.

5.Upper arm length

According to the descriptive statistics, the sub-variable upper arm length's mean and standard deviation are 29.13 and 1.45, respectively, across universities. Nonetheless, the mean and standard deviation for inter-college were 39.80 and 1.32, respectively. When comparing the mean values of the two groups, it was determined that inter-university players had better upper arm length than inter-college players, however the (t) value of 1.313, as displayed in the above table, was deemed statistically insignificant.

6.Lower arm length

The mean and standard deviation of the sub-variable lower arm length across universities are 46.13 and 3.54, respectively, according to the descriptive statistics. Nonetheless, the mean and standard deviation for inter-college were 45.46 and 3.81, respectively. When comparing the mean values of the two groups, it was revealed that inter-university players had better lower arm lengths than inter-college players, however the (t) value of 0.496, as displayed in the above table, was deemed statistically insignificant.

7.Calf girth

According to the descriptive statistics, the sub-variable calf girth's mean and standard deviation across universities are 38.86 and 5.13, respectively. On the other hand, the mean and standard deviation for inter-college were 35.80 and 2.27, respectively. Although the preceding table's (t) value of 2.113 was determined to be statistically significant, it was found that inter-university players had better calf girth than inter-college players when the mean values of the two groups were compared.

8.Thigh girth

According to the descriptive statistics, the sub-variable thigh girth's mean and standard deviation across universities are 88.73 and 7.84, respectively. Nonetheless, the mean and standard deviation for inter-college were 82.86 and 4.62, respectively. When comparing the mean values of the two groups, it was determined that inter-university players had better thigh girth than inter-college players, despite the fact that the (t) value of 2.495, as displayed in the above table, was statistically significant.

Conclusion

The comparative analysis of anthropometric measurements between inter-university and inter-college players reveals the following:

While none of the leg and arm length variables (leg length, upper leg length, lower leg length, arm length, upper arm length, and lower arm length) showed statistically significant differences based on t-values, inter-university players consistently demonstrated higher mean values across all these measurements. This indicates a trend toward better anthropometric characteristics among inter-university players, even though the differences are not statistically significant.

However, calf girth and thigh girth showed statistically significant differences, with inter-university players displaying notably greater girth measurements. These findings suggest that inter-university players may possess better-developed lower body musculature, possibly due to higher levels of training and competition exposure.

Overall, the study indicates that although most anthropometric differences between the two groups were not statistically significant, inter-university players generally exhibited superior physical characteristics, with calf and thigh girths standing out as significant distinguishing factors.

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