

Comparative Study of Anthropometrical Measurements and Body Composition between Inter Universities Level Football and Kho-Kho Players of Selected State Universities of Karnataka

H. N. Lokesh^{1*} Dr. Muni Reddy²

¹PhD Research Scholar, Dept. Physical Education, Dravidian University, Kuppam

²Research Supervisor, Retd., Director, Directorate of Physical Education, Bangalore University, Bangalore

Abstract – Anthropometry and physiology assume an essential part in choosing the specific form of the body with different estimations of the portions of the body it has additionally its significance in the recorded of Football and Kho-Kho amusement. Somewhat or by and large the body stature length of different level and estimations of the differs body fragments, beat rate pulse Hemoglobin, fundamental limit and body synthesis effect sly affect the execution of these amusement players. The agent in the present investigation endeavored to test this hunch to think about the contrast between the different physiological and Anthropometrical estimations of Football and Kho-Kho players. The point of this examination was to dissect the anthropometric factors of football and kho-kho players. For show think about 40 universities level male football (n=20) and kho-kho (n=20) players were chosen from, two locale of Karnataka. The age assemble chose for this examination was 17.64 ± 2.54 a long time. Information was gathered by administrating chosen anthropometric estimations which were standing stature, sitting tallness, leg length, upper a safe distance and lower arm length. The gathered information were broke down by utilizing t-test at 0.05 level of essentialness. Aftereffects of this examination uncovered that there was a noteworthy distinction between Standing tallness ($t=6.61$), Sitting stature ($t=2.93$) and Forearm length ($t=3.23$). As there was a unimportant contrast between Leg length ($t=1.99$) and Upper a safe distance ($t=1.97$).

Keywords: Anthropometric, Football, Kho-Kho Players.

-----X-----

INTRODUCTION

As we understand that recreations like Judo, wrestling, Football, Kho-Kho, have been comprehensively recognized as an exceedingly forceful recreations all through the world. These recreations overseeing in mind boggling solicitation of dangerous leg quality, arm, and shoulder. The Motor wellness segments are characteristics that contenders must make to physically prepares for sports rivalry. Games preparing programs are intended to construct these segments in the correct extents the match the prerequisites of each game. Wellness upgrades general prosperity and it is major for full and vivacious living.

Numerous amusements performed on a court or on a field require fast total body advancements. An extensive part of these are in light of the development

of a ball, limitation players, or associates (Young, 2006). Motor health is one of the genuine sections of physical wellbeing what's more, consolidates such parts as solid quality, speed, deftness, change and co-appointment.

These characteristics are not as particularly essential as cardio-respiratory health for general prosperity yet play a couple of fundamental quick and underhanded parts both in viable prosperity and execution confine. "Health is an extensive term meaning dynamic characteristics that empower you to satisfy your necessities with respect to mental and enthusiastic constancy, social mindfulness and flexibility significant and moral fiber normal prosperity enduring with your heredity. Engine limit

tests measures the fast furthest reaches of a man to partake in a variety of amusements.

REVIEW OF LITERATURE

For all competitors engaged with high expert aggressive games the body is required to perform at ideal limit regarding biomechanics and physiology (Zaccagni, 2011). Thus, it is more than sensible to anticipate from top-level competitors to have a build, ideal quality what's more, perseverance suited to the practical necessities of the brandish being referred to. Be that as it may, choice of talented competitors into delegate groups is regularly in light of the subjective feeling of alleged master determination mentors (Matthys et al., 2011). By the by, it is generally realized that there is a developing enthusiasm for enhancing the human execution of competitors as identifies with the qualities related with cognizance, mindfulness and psychological exertion (Micoogullari et al., 2012) and recognizing abilities, qualities and shortcomings, doling out player positions and helping in the plan of ideal preparing programs (referred to in Hadzic et al., 2012) everywhere throughout the world, including Western Balkan nations. Be that as it may, in numerous spots substantially more time is spent on expanding the physical wellness of competitors without thinking about the evaluation of their body arrangement and their nourishing status (Triki et al., 2012). Contemporary game science is intended to progress the execution of first class players and to find abilities as correctly as would be prudent. Albeit numerous examinations have appeared that particular anthropometric qualities are altogether related with accomplishment in sports (Malina et al., 2004), this process is extremely requesting, as different athletic occasions require varying body writes to accomplish most extreme execution.

Along these lines, understanding the body arrangement of top-level competitors, and after that doling out relating focused weights for the competitors, has been improved the situation decades and is viewed as a basic piece of the aggregate administration process (Wilmore, 1982). Then again, in spite of the fact that youngsters and juvenile sportsmen develop in a way like non-sportsmen (Rexhepi and Brestovci, 2010a), it is broadly tended to in the logical writing that sufficient profiles are principally essential in different sports, for the most part because of the reason that total size contributes a critical level of aggregate fluctuation related with athletic achievement (Carvajal et al., 2012). Hence, researchers everywhere throughout the world are searching for a standard equation that can enhance the execution of world class players and find gifts as proficiently as could be expected under the circumstances (Popovic et al., 2013a).

The anthropometrical qualities and body organizations of competitors has been the subject of numerous examinations the same number of analysts have

conjectured that rehearsing competitors may be relied upon to show auxiliary what's more, utilitarian qualities that are particularly positive for their particular game (Singh et al., 2010). Since each wear has its own particular requests, each competitor ought to have particular anthropometrical qualities and body organization figures for his or her own games train. A few games, for example, wrestling, require considerably more learning in regards to this subject than others, due to its weight confines and in addition supporting the determination of competitors with a constrained vertical skeletal advancement (Norton et al., 2004). Then again, a few games, for example, arm-wrestling, require the choice of competitors with the longer bones of the lower arm (Akpınar et al., 2012).

Be that as it may, this reality does not diminish the need to research the anthropometrical attributes and body organization quantities of soccer and volleyball players, as sufficient body synthesis and weight figures, among different variables, add to ideal exercise schedules and execution (Massuça and Frago, 2011).

As indicated by these two creators, weight can impact a competitor's speed, perseverance, and power, while body sythesis can influence quality and spryness. As it were, effective interest in both soccer and volleyball games, beside the abnormal universities of specialized and strategic abilities, likewise requires from every competitor appropriate anthropometrical qualities what's more, body organization. A large portion of the illustrative information concerning attributes of soccer and volleyball players originate from America and Western Europe, in spite of the fact that there is an absence of information from Eastern Europe, particularly Western Balkan. Consequently, this examination plans to check if this is valid for Western Balkan nations to take after numerous past investigations that have assessed perfect anthropometric profiles of effective soccer player (Milanovic et al., 2012; Reilly et al., 2000; Veale, 2010) and also volleyball player (Bayios et al., 2006; Gualdi-Russo and Zaccagni, 2001; Hooper, 1997; Lidor and Ziv, 2010) that give understanding into the prerequisites for contending at the pinnacle of their specific sports.

Undoubtedly, soccer is a group activity that is played in an open air field and requires an elevated requirement of readiness through the improvement of physical execution aptitudes, and also strategic and specialized skill, keeping in mind the end goal to finish a hour and a half of focused play. As indicated by Triki et al., soccer preparing is for the most part in view of development executing the perseverance characteristics comprising of direct action rotating with times of irregular high power, prompting a critical creation of metabolic heat, for the most part because of the way that the normal work force amid

a soccer coordinate is more often than not around 75–90% of greatest heart rate, separately 70–85% of VO2 max (Rexhepi and Brestovci, 2010a). Then again, volleyball is by and large played in an indoor field that is significantly littler than that of a soccer field, in which two groups of six players are isolated by a net. It requires a exclusive requirement of arrangement keeping in mind the end goal to finish for three sets of aggressive play and to make progress. In this diversion, development designs essentially vary from soccer, as it requires their assault and resistance to be considerably more viable and in addition the predominance over the net progresses toward becoming the most conclusive factor for triumph.

The best level volleyball players don't have VO2 max esteems on the abnormal universities as run of the mill continuance prepared first class players in other sports, however they groups an ideal level of oxygen consuming limit that is required for playing this amusement since it might here and there proceed for longer time (Lidor and Ziv; Sheppard et al., 2009). This amusement likewise incorporates vast number of spiking, hopping, control hitting, blocking, and setting that is mostly in light of an abnormal universities of quality furthermore, control (Lidor and Ziv; Popadic Gacesa et al., 2009).

METHODOLOGY

Sample collection

For show consider 40 universities level male football (n=20) and kho-kho (n=20) players were chosen from, two regions of Karnatak. The age amass chose for this investigation was 17.64 ± 2.54 years.

Selection of Variables

Following anthropometric attributes were chosen as factors for this examination

1. Standing stature
2. Sitting stature
3. Leg length
4. Upper a safe distance
5. Lower arm length

Estimations of the body was finished by anthropometric pack what's more, recorded in centimeters.

Body Compositions

- Body Density

- Fat %
- Fat Weight
- Lean Body Mass

Statistical Strategy

To discover the hugeness distinction between chose anthropometric factors of male players of Football and Kho-Kho, free t-test was connected where level of essentialness was picked as 0.05.

Table 1: Score of Anthropometric Variables of male football and kho-kho players

Sr. No	Variables	Football			Kho-kho			t-value
		Mean	SD	SE	MEAN	SD	SE	
1.	Standing height	173.45	3.845	0.882	182.75	4.982	1.143	6.61*
2.	Sitting height	86.625	2.869	0.658	89.425	3.125	0.717	2.93*
3.	Leg length	89.25	4.629	1.062	92.525	5.734	1.315	1.99
4.	Upper arm length	35.975	35.975	0.455	37	1.213	0.278	1.97
5.	Forearm length	46.35	1.994	0.457	47.95	0.958	0.219	3.23*

T value=2.012 (*) Significant results

Table 2 Score of body composition of male football and kho-kho players

Sr. No	Variables	football		Kho-kho		t-value
		Mean	SD	MEAN	SD	
1.	Body density	1.063	0.003	1.067	0.006	2.074*
2.	Fat %	15.67	1.64	13.60	2.60	2.129*
3.	Fat weight	11.21	1.59	8.11	1.78	4.092**
4.	Lean body mass	60.90	2.40	51.26	2.05	9.633**

*Significant at 0.05 level of significance **Significant at 0.01 level of significance

RESULT

The information was dealt with measurably and classified by working out their math mean, standard deviation, standard blunder mean and t-values. The information gathered was broke down yet taking importance estimation of (t-0.05).The examinations demonstrates that the was no importance contrast between two gatherings on the premise of Leg length (t=1.99) and Upper a safe distance (t=1.97) however, there was a noteworthy distinction between two gatherings on the premise of Standing tallness (t=6.61), Sitting stature (t=2.93) also, Forearm length (t=3.23).

CONCLUSIONS

In the present investigation it was reasoned that the Kho - Kho players are taller than the Football players. Their sitting tallness is more and in addition they have more lower arm length. Then again there was an irrelevant distinction between the leg length and upper a safe distance. Concerning arrangement, there is a noteworthy distinction in, Fat percent, fat weight and fit weight. Football players are discovered more in Fat percent, fat weight and fit weight in contrast with Kho-Kho players. There is a noteworthy contrast in body thickness amongst Football and KhoKho players. Kho-Kho players are more in body thickness in contrast with Football players.

REFERENCES

- Clarke H.H., Clarke D.H. (1987). Use of Measurement to wellbeing and to Physical Education USA: Prentice Hall, Inc. Engle wood bluffs.
- Clarke Harison H. (1987). Use of estimation to Physical Education, 370.
- Clarke Harison H. (1987). Use of estimation to Physical Education, 370.
- Correlation of Selected Anthropometric Measurements also, Body Composition of Fast and Spin Bowlers of Uttar Pradesh U-19 Cricket, Dr. Rajeev Choudhary* Sarvesh Tiwari, Santosh Kumar, Vaibhav Rai (2012). Indian Journal of Development Education and Exercises Sciences (IJMEES), Semiannual Refereed Journal, 2012; II:1.
- Fukushima S. (1981). Physical Conditioning, SNIPES, Vol. 4, No. 1. Gabbett, T.J. (2006). A correlation of physiological and anthropometric attributes among playing positions in sub-first class rugby league players. Games Sci., Dec; 24(12): pp. 1273-80.
- Haithami, S. S., Gabal, M. S., Masber, A. A. also, Nofley, A. (1989). Anthropometric appraisal of wholesome status and development of youngsters in popularity based Yemen. J. Egypt Pub. Wellbeing Assoc., 64 (5-6) : pp. 431-444.
- Kamlesh, M.L. (1994). System of Research in Physical Education and Sports. New Delhi: Metropolitan Book Co. Pvt. Ltd.
- Kansal, D. K. (1996). Test and Measurement in Sports and Physical Education. New Delhi: D.V.S. Distributions.
- Manmeet Gill, Nishan Singh Deol and Ramanjit Kaur (2010). Relative Study of Physical Fitness Components of Rural and Urban Female

Students of Punjabi College, Patiala, Kamla-Raj Anthropologist, 12(1): pp. 17-21.

- Maragret, T.A. (1964). "Body Structure and Design Factors in the Motor Performance of College Women", Research Quarterly, 35: p. 418.
- Mathew, D. K. what's more, Fox, E. L. (1976). The Physiological Basis of Physical Education what's more, Athletics, W.B. Saunders Company, Philadelphia.
- Pilli, Ramu (2010). Correlation of anthropometric and physical factors among kho-kho and handball players of Andhra Pradesh School Games groups, Br J Games Med 2010;44:i34 doi:10.1136/bjism.2010.078725.112 .
- Pollock and Pate. Michael L. Pollock and Russel R. Pate (1980). "Discriminant Examination of Physiological Differences Between Good and Elite Distance Runner's", Research Quarterly for Exercise and Sports : 51, October, pp. 521- 532.
- Ross WD, Drinkwater DT, Bailey DA, Marshall GR, Leahy RM. Kinanthropometry; Traditions and new point of view. In: M.Ostyn, G.Beunen, and J.Simons (eds.) Kinanthropometry II. Worldwide Series on Sports Science. 9. College Park Press, Baltimore, 1980, pp. 3-27.

Corresponding Author

H. N. Lokesh*

PhD Research Scholar, Dept. Physical Education, Dravidian University, Kuppam

E-Mail –