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Comparative analysis of speed and resting pulse rate between Annamalai university kabaddi and kho-kho players

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Abstract
Physical fitness is the capacity of an organism, which must be enough to perform the given takes. Vigorous physical activity is the only means of developing optimum physical fitness to attain the zenith of performance. It is a physiological fact that the human organism needs stimulating exercise. The purpose of the present study is to compare and analysis of speed and resting pulse rate between kabaddi and kho-kho players. For this purpose fifteen male kabaddi and fifteen male kho-kho players who were studying in various courses of Annamalai University selected as subjects. Their age ranged between 19 and 25 years (mean age = 21 ± 0.9 months). The selected criterion variables for present study was speed and resting pulse rate and speed was assessed by administering 50 meters run and resting pulse rate was assessed by counting their pulse in numbers for one minute during early morning before practicing their respective game. One Way Analysis of Variance (ANOVA) was administered as statistical tool for the present study. The result of the study shows that there was a significant difference exists between kabaddi and kho-kho players on selected criterion variables. Kho-kho players were better in speed and kabaddi players were better in resting pulse rate.

Keywords: Speed, resting pulse rate, kabaddi, kho-kho and ANOVA

Introduction
Human beings have consistently tried to run faster, jump higher and exhibit greater strength, endurance and skill [1]. Physical fitness should improve which can help to improve the overall health and feel more confident. No matter the fitness level, there are some strategies that one can use to achieve the goals [2]. A study has reported that people who completed four to six repeated 30-second sprints maintained the same heart-health benefits as those who did a moderate 40- to 60-minute workout [3]. Think about the use of "FITT" principle of exercise, in which – Frequency (How many days a week do you work out?), Intensity (How hard do you exercise), Time (How long are your workouts), and Type (What specific exercises are you doing) [4]. According to Willgoose (1961) [5] physical fitness is the capacity of an organism, which must be enough to perform the given tasks [5].
Kabaddi, originated in ancient Tamil region in Indian subcontinent, which is predominantly present day Tamilnadu and parts of other South Indian states and the Tamil empire spread this game to South East Asia during their sea trade [6]. The word Kabaddi have been derived from the tamil word "kai-pidi" (கைபிடி) which means "to hold hands" [7] The modern Kabaddi game was played all over India and some parts of South Asia from 1930 [8]. Speed is an essential factor in kabaddi. On the mat, players are required to cover short distances within seconds [9]. "Players do 50m and 80m sprints. Since a raid only lasts for 30 seconds, we sometimes ask the players to do 30-second sprints and a raider burns more calories than a defender. It depends on their position, so it's better to look at their daily load," [9] Actually, kabaddi is an intermittent type of sport and it requires both aerobic, anaerobic endurance with a well-built physique. Since, no physiological study on kabaddi players is available on national or international players except for some pulmonary function tests that have been done on Indian inter-university players [10]. Kho Kho is a traditional game played in India. Its origins are ancient, with strategies and tactics likely derived from the epic 'Mahabharata' and on the 13th day of the war, the Kaurava General Guru Dronacharya created the 'Chakravyuha'

a special military defensive circle which was eventually penetrated by the renowned warrior Abhimanyu [11]. It is played by teams of 12 nominated players out of fifteen, of which nine enter the field, who try to avoid being touched by members of the opposing team [12]. The kho-kho player's performance depends on optimum state of motor factors like speed, endurance, agility, flexibility and the speed and agility are the key characteristics which is the most important factors for good performance [13].

Materials and Methods

To achieve the purpose of this study, fifteen kabaddi and fifteen kho-kho male players were selected as subjects studying in various faculties and departments of Annamalai University, Annamalainagar, Chidambaram and their ages ranged from 19 to 25 years. The selected criterion variables for the present study were speed and resting pulse rate. Speed was assessed by administering 50 meters run and resting pulse rate was assessed by counting their pulse in numbers for one minute during early morning before practicing their respective game. One Way Analysis of Variance (ANOVA) was administered as statistical tool for the present study. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as appropriate.

Analysis of Data

The data collected on speed and resting pulse rate between kabaddi and kho-kho players were analyses and the results were presented in Table – I.

Table 1

Speed (in Seconds)						
	Mean ± SD	**SOV**	**Sum of Squares**	**df**	**Mean Squares**	**'F' - ratio**
Kabaddi Players	7.99 ± 0.07	B	0.120	1	0.120	38.01*
Kho-kho Players	7.86 ± 0.03	W	0.089	28	0.003	
Resting Pulse Rate (in numbers / seconds)						
Kabaddi Players	66.53 ± 2.75	B	50.70	1	50.70	9.42*
Kho-kho Players	63.93 ± 1.79	W	150.67	28	5.38	

* Significant at 0.05 level of confidence. (The table value required for significant at 0.05 level of confidence with df 1 and 28 is 4.20).

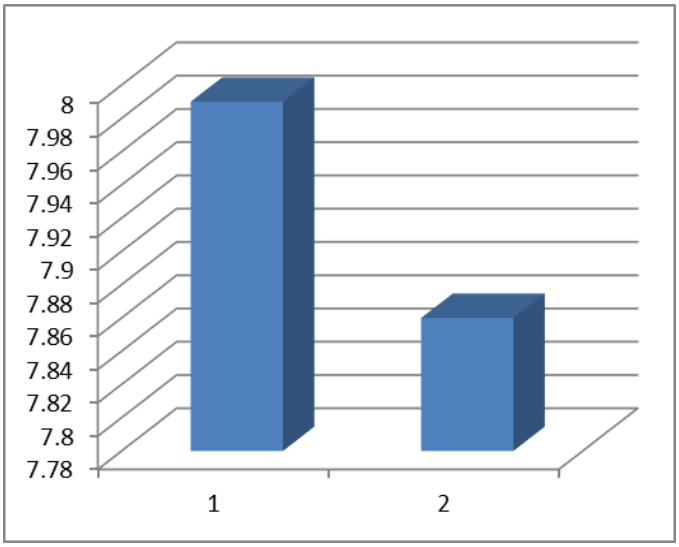

Fig 1: Speed of Kabaddi and Kabaddi Players

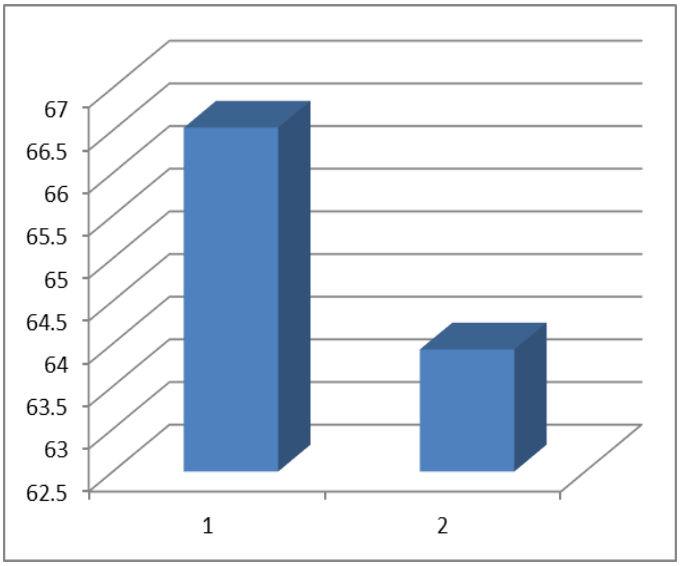

Fig 2: Resting Pulse Rate of Kabaddi and Kho-kho Players

Results & Discussion

From the above Table – I, the mean and standard deviation values of kabaddi players was 7.99 ± 0.07 and kho-kho players was 7.86 ± 0.03 with 'F' ratio of 38.01, which was significant at 0.05 level of confidence. Moreover, the mean and standard deviation values of resting pulse rate was 66.53 ± 2.75 for kabaddi players and 63.93 ± 1.79 for kho-kho players and the 'F' ration was 9.42 which was significant at 0.05 level of confidence.

Conclusions

It was concluded from the result of the study that there was a significant difference found on speed between kabaddi and kho-kho players of Annamalai University. It was also found that kho-kho players have better speed than the kabaddi players [14-16] The result of the study also shows that there was a significant difference found on resting pulse rate between kabaddi and kho-kho players of Annamalai University, in which, kho-kho players were better in resting pulse rate than the kabaddi players [17, 18].

References

1. Bouchard C, Malina RM. Genetics of Physical Fitness and Motor Performance, Exercise and Sports Sciences Reviews. 1983; 11:306.
2. Retrieved from https://www.wikihow.com/Improve-Physical-Fitness on 28-06-2018.
3. Kristin Appenbrink. 15 ways to Improve Your Fitness", https://www.realsimple.com/health/fitness-exercise/workouts/15-ways-get-more-fit (19-06-2018).
4. Retrieved from https://www.webmd.com/fitness-exercise/guide/boost-exercise-routine#1 on 25-07-2018
5. Card E Willgoose. Evaluation in Health and Physical Education, (New York: McGraw Hill Book Publishers C, 1961, 61.
6. Brief History of Indian Traditional Sports (Kabaddi), Retrieved 13 September, 2017.
7. Definition of 'Kabaddi', Retrieved 13 September, 2017.
8. Retrieved from http://www.indiankabaddi.org/history-of-

kabaddi on 18-06-2018.
9. Retrieved from https://www.livemint.com/Sports/8gY5QkHHcnaneBgrLprt6L/How-kabaddi-players-are-becoming-faster-fitter-stronger.html on 21-07-2018.
10. De AK, Debnath PK, Nagchaudhuri J. A Comparison of Physical Efficiency Between Female Volleyball and Kabaddi players", Soc Natl Inst Phys Ed Sports. 1979; (1, 2):46-50.
11. Retrieved from http://khokho.co.uk/about/ on 19-07-2018.
12. Tripura Kh0-kho Association @ Tripura4u, Retrieved 28th March, 2011.
13. Shashi Kant. Playing Ability of Kho-kho from Selected Physical Fitness Variables among College Level Players, International Journal of Physical Education and Sports, 2017; 2(11):45-48.
14. Ashok Kumar Malik, Poonam Devi, Meena Rani. "Comparison of Physical Fitness Components of Kabaddi and Kho-kho Players", International Journal of Applied Research. 2017; 3(1):239-242.
15. Yogesh Kumar Singh, Amit Banerjee, Anup Pradhan, Jitender Kumar. Comparative Study on Selected Physical Fitness Abilities between Kabaddi and Kho-kho Players, International Journal of Physical Education. 2017; 2(8): 13-18.
16. Sudhir KR. Comparison of Strength and Speed between Kho-kho and Kabaddi Male Players, International Journal of Advanced Research. 2016; 4(6):727-730.
17. Kuldip. Comparative Study of Cardio-vascular Efficiency of Kabaddi and Kho-kho Women Players, International Journal of Applied Research. 2016; 2(7):193-194.
18. Sri Chatru L Rathod, Dr. Vishwanath Nadakatti. A Comparative Study on Selected Physical Fitness Components of Kabaddi and Kho-kho Players of Vijayapur School Children, Asian Journal of Physical Education and Computer Science in Sports. 2016; 14(1):37-39.